

Kickstart Instrument Control Software

Keithley Instruments 28775 Aurora Road Cleveland, Ohio 44139 1-800-935-5595 www.tek.com/keithley

Version 2.1 Software release notes

Contents

G	eneral Information	1
	Supported models	
	Supported operating systems	
	PC requirements	2
	Software Prerequisites:	2
	Installation instructions	
	Kickstart Instrument Control Software history	
V	ersion 2.1 release notes	
	Version 2.1 enhancements	
	Usage notes	
	Version 2.1 resolved issues	
	Known issues	
	1410 411 100400	

General Information

Supported models

This software is intended for use on the following Keithley Instruments product models:

NOTE: MDO3 and MSO4 Series are not officially supported in this version. These will officially be supported in a future version.

2000, 2010, 2100, 2110, 2280S-32-6, 2280S-60-3, 2281S-20-6, 2400, 2400-C, 2401, 2410, 2410-C, 2420, 2420-C, 2425, 2425-C, 2430, 2430-C, 2440, 2440-C, 2450, 2460, 2461, 2470, 2601A, 2601B, 2602A, 2602B, 2604B, 2606B, 2611A, 2611B, 2612A, 2612B, 2614B, 2634B, 2635A, 2635B, 2636A, 2636B, 2657A, 2700, 2701, 2750, 3706A, 3706A-NFP, 6430, 6485, 6487, 6514, DAQ6510, DMM6500, DMM7510,DPO3012, DPO3014, DPO3032, DPO3034, DPO3052, DPO3054, DPO4014B, DPO4034B, DPO4054B, DPO4102B, DPO4102B-L, DPO4104B, DPO4104B-L, DPO4032, ,DPO4034, DPO4054, DPO4104, DPO4k, MDO3012, MDO3014, MDO3022, MDO3024, MDO3032, MDO3034, MDO3052, MDO3054, M

June 2019

MDO4054B-3, MDO4054B-6, MDO4104B-3, MDO4104B-6, MDO4014-3, MDO4034-3, MDO4054-3, MDO4054-6, MDO4104-3, MDO4104-6, MDO4024C, MDO4034C, MDO4104C, MDO4054C, MDO4054C, MDO4k, MSO3012, MSO3014, MSO3032, MSO3034, MSO3052, MSO3054, MSO4034B, MSO4054B, MSO4012B, MSO4012B-L, MSO4104B, MSO4104B-L, MSO4032, MSO4034, MSO4054, MSO4104

NOTE

The new MDO3 Series and MSO4 Series are not officially supported in this version. These will be supported in a future version.

Supported operating systems

Kickstart is supported on the following operating systems:

Windows® 10, 64-bit (Creator's update)

Windows® 8, 64-bit

Windows® 7, 64-bit

PC requirements

Processor: Dual-core processor 2 GHz or better

RAM: 8GB

Display resolution: Minimum 1920 × 1080 recommended

Disk Drive Space Required: 8 GB of free space

Software Prerequisites:

NI VISA 17.5 Runtime or newer (installation package included in KickStart installer)

Microsoft Visual Studio C++ 2013 x64 Redistributable Package

Microsoft Visual Studio C++ 2017 x64 Redistributable Package

.NET Framework 4.7

When installing KickStart without an internet connection, make sure that the last three software prerequisites are installed on your PC before installing. The NI VISA 17.5 Runtime is packaged with the KickStart installer.

Installation instructions

Download the KickStart 2.1.0 installer from www.tek.com/keithley-kickstart. Unzip the file and run KickStartSetup.exe.

Follow the installation instructions and accept all default settings.

The installer will install the required files into the following default location: $C:\Program\Files\Keithley\Instruments\KickStart$

KickStart version 2.1.0 requires a software license. The software installs with a one-time 60-day free trial. For more information on licenses available for KickStart version 2.1.0, please visit www.tek.com/keithley-kickstart.

For more information on KickStart, see the "KickStart Quick Start Guide" (document number: KKS-903-01). This Quick Start Guide is available online at www.tek.com/keithley-kickstart.

Kickstart Instrument Control Software history

Version	Release date
2.0.0	April 2018
2.0.1	July 2018
2.0.2	July 2018
2.0.3	August 2018
2.0.4	October 2018
2.0.5	November 2018
2.0.6	February 2019
2.1.0	June 2019

Version 2.1 release notes

Version 2.1 enhancements

Issue number:	KS-581, KS-583
Improvement:	A new Scope App was added to KickStart. Support for the DPO3k, DPO4k, MDO3k, MDO4k, MSO3k, and MSO4k oscilloscopes.
Issue number:	KS-339
Improvement:	A trigger position was added as a configurable parameter to the DMM App called the "Pretrigger %". If an external trigger is selected in the DMM App with either the Model 6510, 6500, or 7510, this control will be configurable to how many readings are shown before the trigger. The trigger position in the data has a 0.0 timestamp, and readings before the trigger have negative timestamps. If you select an infinite count, then this "Pretrigger %" control will not be available.
Issue number:	KS-622, KS-623, KS-624
Improvement:	Support for the Models 6485, 6487, and 6514 was added to the DMM App.

Issue number:	KS-811
Improvement:	You can now copy statistics values in the footer of the table to the clipboard by selecting the value and using right-click -> Copy or Ctrl+C.
Issue number:	KS-2177
Improvement:	The Model 2657 is now supported in the IV Characterizer app.
Issue number:	KS-2256
Improvement:	The Model 2470 is now supported in the IV Characterizer App.
Issue number:	KS-2355
Improvement:	When the Models 6510 and 6500 are configured for digitizing in the DMM App, the front panel screen of the instrument will show Processing Readings when the test is running to improve performance. Switching to this screen means the instrument does not have to update the front panel during this period. The 7510 does not have a Processing Readings screen yet, so it will switch to the Menu screen. Through the front panel, you can switch screens, but this may affect the throughput you get with the instrument.
Issue number:	KS-2476
Improvement:	You are now able to resize columns in a table.
Issue number:	KS-2702
Improvement:	You can now configure the auto-zero setting on instruments when using the DMM app.

Usage notes

Issue number:	KS-1899
Symptom:	In version 1.9.x, Kickstart allowed a user to control multiple TSP-linked instruments in the I-V Characterizer App by connecting only one instrument to the computer. The software will no longer allow this functionality.
Workaround:	KickStart no longer uses TSP-Link as a communication interface. The user should connect each individual instrument to the computer using a supported VISA interface (USB, GPIB, or LAN). The user can still use multiple instruments in the I-V Characterizer App and can add instruments to the App using the instrument manager on the App toolbar.

Issue: Scope App firewall The Scope App requires that permissions be configured in any firewall on the PC Symptom: running KickStart. This is to enable the Service Request (SRQ) feature of the VISA I/O software library. This is only required if the scope is on the LAN. Workaround: The KickStart installer will configure the Windows Defender Firewall when you install the software for you. But in case this step fails or that you are using a different firewall software then you will need to manual do the following: Configure an inbound and outbound rule that: "KickStart.exe" in the "C:\Program Files\Keithley Instruments\KickStart" folder, for all domains, is allowed. This failure will show if you select an instrument and then select the Scope App. An error message pops up saying that there is either a connection error or firewall issue. The error message reads, "Enabling the SRQ Failed. Check the connection to the Instrument. This could be a firewall issue. Check the KickStart release notes in the Installation Instructions section for more information about the configuring the firewall."

Version 2.1 resolved issues

Issue number:	KS-2097
Resolution:	The IV-Characterizer settings export unit issue is corrected.
Issue number:	KS-2243
Resolution:	The graph in KickStart no longer jumps horizontally back and forth in datalogging test when live-auto-pan is enabled.
Issue number:	KS-2251
Resolution:	The issue with dual-channel 26XX simulated instruments is corrected.
Issue number:	KS-2253
Resolution:	KickStart now stops all apps when the software is closed.
Issue number:	KS-2331
Resolution:	The Model 3706A duration scan now stops after the elapsed time.
Issue number:	KS-2365
Resolution:	When using REL acquire in the DMM app, the instrument will now be left at its present setting.

Issue number:	KS-2393 / AR-61933
Resolution:	External trigger now works correctly on Models 2700, 2701, and 2750.
Issue number:	KS-2401
Resolution:	Checks were added to prevent KickStart from crashing when saving a project.
Issue number:	KS-2446, KS-2447, KS-2055
Resolution:	Improvements have been made to the digitizing of data with the Models 6510, 6500, and 7510 in the DMM App. If the digitizing rate is 100 KHz or less, then KickStart will retrieve small amounts of data from the start of the test and update the sheet and graph accordingly. When the instrument has completed the test, KickStart will switch to retrieving significantly larger chunks of data until all the data has been transferred from the instrument to KickStart.
	For digitizing rates over 100 KHz, KickStart will not retrieve any data until the test has completed.
	If an infinite digitizing count is selected, then the maximum digitizing rate is limited to 60 KHz.
Issue number:	KS-2481
Resolution:	KickStart no longer shows previously hidden rows on the graph.
Issue number:	KS-2482
Resolution:	KickStart now shows the correct data resolution for graph markers and hover tooltips.
Issue number:	KS-2520
Resolution:	X-Y labels and gridlines are now consistently spaced for log scale.
Issue number:	KS-2548
Resolution:	KickStart no longer enables data series that were previously disabled when switching the axis scale between linear and logarithmic spacing.
Issue number:	KS-2515
Resolution:	The Model 3706A no longer has an offset added to the timestamp on every scan.
Issue number:	KS-2516
Resolution:	Scan group settings no longer disappear in the DataLogger project.
Issue number:	KS-2531
Resolution:	Graph exporting is now allowed during Auto Export.

Issue number:	KS-2536
Resolution:	Saving projects to network drives works correctly.
Issue number:	KS-2537
Resolution:	Saving data to network drives works correctly.
Issue number:	KS-2547, KS-2638, KS-2647, KS-2694
Resolution:	The Datalogger App now allows you to set custom math units for all models, and these units are applied to the math data in the Table and Graph. If an instrument supports math units, the units are correctly coerced and set to prevent any errors.
Issue number:	KS-2549
Resolution:	Improved the select-all/deselect-all series functionality in the graph legend.
Issue number:	KS-2587
Resolution:	KickStart now has checks to confirm a loss of communication with a DAQ6510 before aborting a test.
Issue number:	KS-2591
Resolution:	Using LAN, The Model 3706A Data Logger no longer aborts with a communication error 360 during long acquisitions.
Issue number:	KS-2631
Resolution:	The Auto Discovery feature is now being turned off when a test is run using a DMM2210 to prevent communication issues.
Issue number:	KS-2641 / AR-62497
Resolution:	KickStart added additional logic to ensure project data is correctly saved.
Issue number:	KS-2643
Resolution:	Excel export is not allowed when data exceeds 1,048,575 rows. If Auto Export is enabled, Excel export will continue until the data exceeds 1,048,575 rows. A warning is placed in the event log to inform users of the export status.
Issue number:	KS-2644, KS-2710
Resolution:	Data exporter was modified to reduce memory consumption and to reduce export time.
Issue number:	KS-2650 / AR-62502
Resolution:	When the IV Characterizer test is running on 26XX instruments with a LAN connection, a time out error no longer occurs when 10,000 or more points and 0 delay are configured at the same time.

Issue number:	KS-2657 / AR-62525
Resolution:	Memory performance by KickStart has been greatly improved. This enhances
	responsiveness during long term datalogging.
Issue number:	KS-2716
Resolution:	Performing another run with cells selected in the table is no longer causing a crash.
Issue number:	KS-2718
Resolution:	The Models 2700, 2701, and 2750 can now be configured with a scan count of 1 with
	the Data Logger app. The previous minimum count was 2.
Issue number:	KS-2723
Resolution:	Under certain circumstances, if the graph or table settings were changed and the
	project saved, the changes were lost. This issue has been corrected.
Issue number:	KS-2733
Resolution:	In some cases, the license manager would report Error Code 36 and stop displaying the
	host ID and prevent licenses to be entered. This issue has been corrected.
Issue number:	KS-2736
Resolution:	Digitizing at high speeds, with an infinite reading count, may have resulted in gaps being
	present in the reading due to instrument limitations. To prevent this, the following
	limits were added. When digitizing faster than 60 kS/s, the maximum reading count is
	5 M readings. When digitizing at sample rates <= 60 kS/s, the infinite count mode will be available.
Issue number:	KS-2747, KS-2875
Resolution:	For resistance and power calculations on 2400 Series Source Measure Unit instruments,
	the absolute value function is no longer applied.
Issue number:	KS-2752 / AR-62710
Resolution:	Resistance calculations in IV characterizer are no longer incorrectly calculated when
	using 2400 Series instruments.
Issue number:	KS-2760
Resolution:	For the Model DAQ6510, starting a scan with on channel limit option now correctly describes when a scan would start.
Issue number:	
	KS-2817
Resolution:	The Model 3706A and the Data Logger App no longer crash on European Windows
	versions that use commas for decimal points.

Issue number:	KS-2864
Resolution:	The output enable setting on the Keithley Series 2400 instruments will no longer reset.
Issue number:	KS-2873
Resolution:	The logic error that allowed multi-channel sweeps to hang has been fixed.

Known issues

Issue number:	KS-510
Symptom:	The 26xxB cannot be reliably discovered over a LAN interface.
Workaround:	Use the Advanced Discovery "Enter an IP address" field to manually add instruments.
Issue number:	KS-1602
Symptom:	Powering on the Datalogger for the Model 2700 while Kickstart is running may cause the 2700 to lock up during the boot up process.
Workaround:	Power ON the Model 2700 before starting the Kickstart application or turn off the Auto Discovery feature in Kickstart.
Issue number:	KS-2067
Symptom:	Using Infinite Measure Count with the Model DAQ6510, DMM6500, or DMM7510 in the DMM App may produce fewer readings than when selecting a finite Measure Count. If the Sampling Rate is fast enough, the internal buffer of the instrument can wrap and begin overwriting data that the KickStart software has not retrieved yet. The test will stop at this point. Using a finite measure count avoids overwriting the instrument's data buffer.
Workaround:	To increase the number of readings that KickStart can take when using infinite measure count, try a slower Sampling Rate.
Issue number:	KS-2071
Symptom:	Running an I-V Characterizer pulse test with a Model 2461 may cause the instrument to lockup, produce instrument errors, and/or abort the test when measuring the complete pulse and the sample rate is set a high value.
Workaround:	Run at a lower sample rate or reduce the total pulse time (reduce number of pulses).
Issue number:	KS-2475
Symptom:	If you use digitized streaming with the DMM App for long periods of time at high-data rates, the app may stop the test because of buffer overruns.
Workaround:	Run the test at lower data rates or for shorter periods of time.

Issue number:	KS-2539
Symptom:	Running Export All with Export Graph enabled will only export the graph for the latest run.
Workaround:	Select the run and use the Export Selected Runs option. Selecting multiple runs from the Run History window and selecting the Export Selected Runs button will export one graph with the traces overlaid
Issue number:	KS-2611
Symptom:	If a project is opened that contains an instrument that is currently connected to the PC, but in the wrong command language, the app may be unusable after changing command languages.
Workaround:	Make sure that all TSP language-capable instruments are set to use the TSP command language prior to loading your KickStart project.
Issue number:	KS-2881
Symptom:	In the Scope app, if a waveform capture is started prior to the scope finishing acquisition, a communication error may appear in the event log and only partial data will be captured. This only applies when Wait for Trigger is unchecked.
Workaround:	Be sure to allow the scope to complete processing the acquisition prior to starting capture.
Issue number:	KS-2894
Symptom:	 When using a 4000-series oscilloscope with the Scope App and the following are true: 20-M record length Capture math data is enabled Waveforms mode is used
	 Waveforms mode is used Wait on Trigger is unchecked
	Oscilloscope is in Run Continuous acquisition mode
	an instrument timeout may occur and KickStart aborts data acquisition.
Workaround:	Ensure that the oscilloscope is in the stopped acquisition mode to allow for the time required to calculate the math waveform data to occur prior to initiating the capture in KickStart
Issue number:	PR-61681
Symptom:	The Model 2750 monitor mode does not stop scanning when the signal is back within limits.